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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,524	11/25/2003	Richard A. Blanchard	03-C-040 (850063.602)	5333
30423	7590	11/03/2004	EXAMINER	
STMICROELECTRONICS, INC.			ERDEM, FAZLI	
MAIL STATION 2346			ART UNIT	
1310 ELECTRONICS DRIVE			PAPER NUMBER	
CARROLLTON, TX 75006			2826	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,524

Applicant(s)

BLANCHARD ET AL.

Examiner

Fazli Erdem

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 34-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 and 34 is/are allowed.
- 6) ☒ Claim(s) 1-13, 18, 19 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 14-17 and 20-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 34-44 allowed.
2. Claims 14-17 and 20-24 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
3. The following is a statement of reasons for the indication of allowable subject matter:
Prior art failed to establish the required relationship between the first and the second beam with respect to the first and the second trench.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
5. Claims 1-12 and 25-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Shaw et al. (5,610,335) in view of Shaw et al. (5,847,454).

Regarding Claims 1-12 and 25-27, Shaw et al. '335 disclose a microelectromechanical lateral accelerometer where in Fig. 17, cantilever type beam 380 is disposed inside trench 410 with insulating layer 403, and conductive plates 404 and 406. Beam is connected to substrate 390 on one portion with connector 396. The second portion of the beam is spaced apart from the walls of the trench 411. Shaw et al. '335 fail

to specifically disclose that one portion of the beam is movable and the other portion is fixed/attached/connected to the substrate. However, Shaw et al. '454 disclose electrically-isolated released microstructures where in Claim 1, Shat et al. disclose a beam with one portion interconnected and one portion movable.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required movable and connected portions of the cantilever beam in Shaw et al. '335 as taught by Shaw et al. '454, in order to have a semiconductor device with more functionality.

6. Claims 13, 18 and 19 rejected under 35 U.S.C. 103(a) as being unpatentable over Shaw et al. (5,610,335) in view of Shaw et al. (5,847,454) further in view of Mizukoshi (5,503,017).

Regarding Claims 13, 18 and 19, Shaw et al. '335 disclose a microelectromechanical lateral accelerometer where in Fig. 17, cantilever type beam 380 is disposed inside trench 410 with insulating layer 403, and conductive plates 404 and 406. Beam is connected to substrate 390 on one portion with connector 396. The second portion of the beam is spaced apart from the walls of the trench 411. Shaw et al. '335 fail to specifically disclose that one portion of the beam is movable and the other portion is fixed/attached/connected to the substrate and the required first and the second beams inside the first and the second trenches. However, Shaw et al. '454 disclose electrically-isolated released microstructures where in Claim 1, Shat et al. disclose a beam with one portion interconnected and one portion movable. Furthermore, Mizukoshi discloses a semiconductor acceleration sensor where in Fig. 4, it is disclosed first and second beams disposed inside first and second trenches.

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It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required movable and connected portions of the cantilever beam and the first and the second beams inside the first and the second trenches in Shaw et al. '335 as taught by Shaw et al. '454 and Mizukoshi respectively, in order to have a semiconductor device with more functionality.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (571) 272-1914. The examiner can normally be reached on M - F 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


FE

November 1, 2004

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